

In the Specification:

Please replace the paragraph beginning at page 1, line 4, with the following rewritten paragraph:

b8  
-- This application claims priority on Japanese Patent Application No. 11-321621 filed on November 11, 1999 and Japanese Patent Application No. 2000-293719 filed on September 27, 2000. --

Please replace the paragraph beginning at page 3, line 36, with the following rewritten paragraph:

b9  
-- The invention is also directed to a battery pack comprising: a case containing a plurality of cells; at least one air passage formed within the case for allowing cooling air outside the case to enter the case, pass along and/or between the cells, and exit from the case; and radiator means provided in the at least one air passage so as to be in contact with outer surfaces of the cells, the radiator means having portions each of which corresponds to at least one of the cells, wherein the portions have different heat capacities according to the heat conditions of the corresponding cells. --

Please replace the paragraph beginning at page 4, line 29, with the following rewritten paragraph:

b10  
-- According to one practice of the present invention, the battery pack comprises one first cell group located generally in the center thereof and two second cell groups opposing the first cell group across branches of the at least one air passage. --

Please replace the paragraph beginning at page 5, line 21, with the following rewritten paragraph:

b11  
-- In accordance with still another aspect of the present invention, each second cell group has inner surfaces in contact with one of the second radiator plates, and each second cell group is arranged in a single row of cells bent at one intermediate cell toward the inner surface, the

p11  
portion of each second radiator plate corresponding to the intermediate cell including two bulges adjacent to the intermediate cell. –

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Please replace the paragraph beginning at page 5, line 26, with the following rewritten paragraph:

p12  
-- In accordance with yet another aspect of the present invention, each bulge is thicker than the remainder of the second radiator plate. –

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Please replace the paragraph beginning at page 10, line 1, with the following rewritten paragraph:

p13  
-- Also provided in the rear portion 58 of the connecting portion 54 is a terminal block 59 which includes charging terminals 60, a temperature detection terminal 61, and a connector type data transmission terminal 62. Referring to Figures 8 and 9, a cooling fan 63 is provided inside the charger case 51 rearward of the terminal block 59. The fan 63 is positioned along the longer side of the charger case 56 and has an upwardly-directed airflow supply port 64 connected in communication with a square airflow passageway 66 which is integrally formed in the upper case 52. The cooling fan 63 additionally includes an intake port 65 which faces rearward. Also integrally formed in the lower case 53 are air intake ports 67 for supplying cooling air. Furthermore, a partition wall 68 is provided in the lower case 53 so as to enclose the portion of the fan 63 lying within the lower case 53, whereas a corresponding vertically-disposed partition wall 69 is integrally provided in the upper case 52 so as to conform to the upper surface of the fan 63 other than the portions connecting the airflow supply port 64 and the airflow passageway 66. In this way, only air from the exterior of the charger 50 is supplied to the fan 63 through the intake port 65. –

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Please replace the paragraph beginning at page 11, line 10, with the following rewritten paragraph:

p14  
-- According to the above embodiment, the battery pack 1 has a dual structure in which the cells 14 are housed in the inner case 13, which is in turn contained within the outer enclosure 2 with the first air passages 24 and the second air passage 25 separated from the cells 14.

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BMH  
Additionally, the radiator plates 22 are provided in the part of the first air passages 24 and the second air passage 25 where they come into contact with the outer surfaces of the cell groups, with each radiator plate including fins 23, the number of which increases toward the downstream direction of the cooling airflow. This results in a greater heat capacity of each radiator plate 22 within the downstream direction of the airflow and thus ensures an appropriate cooling effect of the plates 22 despite increases in temperature of cooling air downstream. Due to this arrangement, as the cells have an even temperature distribution, i.e., the relative temperatures of the cells 14 are maintained at about the same level, resulting in an increase in the overall service life of the battery. Moreover, the provision of the fins 23 advantageously and easily augments the surface area and volume of the plate and thus the overall heat capacity of each radiator plate 22. —

Please replace the paragraph beginning at page 14, line 13, with the following rewritten paragraph:

BMH  
-- Upon commencement of charging, the fan 63 sends cooling air into the outer enclosure 2 via the airflow passageway 66 of the charger 50, the pack's intake port 9, and the cylindrical channel 75. Thereupon, the cooling air flows through the guide passage 76 of the lower holder 16 and the air passage 72 within the inner enclosure 13 and eventually exits to the exterior of the battery pack 1 through the discharge ports 11, while suppressing increases in temperature of the cells by cooling the radiator plates 73 and 74. Particularly in this embodiment, different materials are selected for the radiator plates 73 and 74 in consideration of the difference in the heat conditions between the respective cell groups. Furthermore, the cells in the cell group 70 have different areas of contact with the radiator plate 73, and each of the radiator plates 73 and 74 includes portions having different thicknesses. The purpose of these features of the radiator plates is to provide a suitable heat capacity for different plate portions that are brought into contact with cells with different heat buildup characteristics. Accordingly, these arrangements can effectively cope with variations in the temperature of the cells 14a-14f, for example, due to increase in temperature of the cooling air downstream, maintaining a proper temperature balance among the cells 14a-14f. This addresses the problem of certain cells reaching the end of their life span faster than others, thus increasing the service life of the entire battery more effectively

P13  
than the arrangement of the first embodiment. Moreover, the charging time is shortened as the cells of this embodiment are well protected against excessive heat buildup. That is, in conventional battery chargers, the charging circuitry is protected by a reduction in the charging current, which results in longer charging times. However, the relationship between temperature and charging time also means that cooling allows the charging current to be similarly increased, thus shortening the charging time. --

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Please replace the paragraph beginning at page 14, line 37, with the following rewritten paragraph:

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P14  
-- According to this embodiment, as the heat capacity of the radiator plates 73 and 74 and the distribution of heat capacity in each type of plate are adjusted by the selection of different materials for the plates 73 and 74, the use of differing areas of contact of the cells in each group 70 with the plate 73, and the provision of portions with different thicknesses in the plates 73 and 74, the heat capacity of different plates and/or different portions of the plates can be more easily and effectively adjusted. If more than one of these arrangements/means are combined, adjustment of the heat capacity of the plates becomes even easier and more accurate. --

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